Title	TI 84 Graphing Calculator Operation Guide [Binomial and Normal Distribution]
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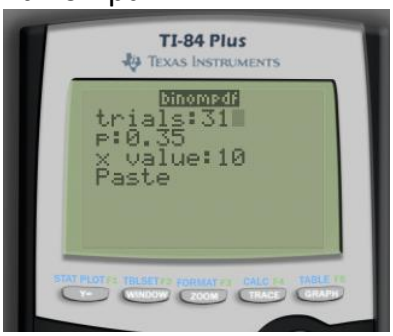
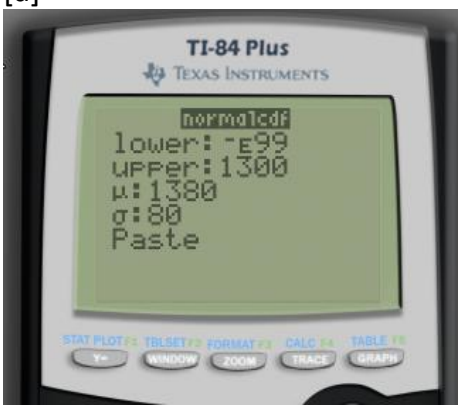
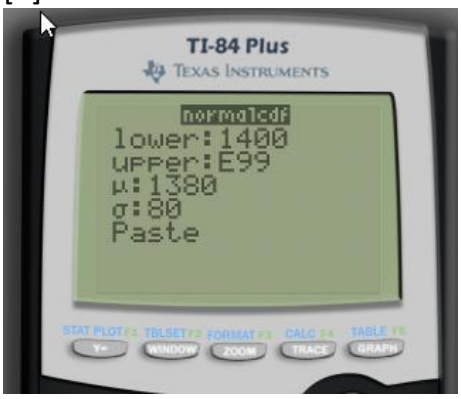
Date	2/3/2025

To enter TI-84 Graphing Calculator (GC) probability distribution calculation functionality press the following buttons on the GC:
[2ND], followed by [VARS]
To search for other probability distribution calculation functionality, simply scroll down by pressing the down key repeatedly until other functionalities appear.

Name of Functionality in GC	Use Case and Example
"binompdf" 	Use Case: Computation of probability of Binomial Distribution for a specific number of trials out of a specific n total number of random samples. Example: Given $X \sim B(n,p)$ and $P(X=x)=\binom{n}{x}p^x(1-p)^{n-x}$, you use this functionality to find the probability of obtaining the outcome mentioned in the question just by running exactly k number of trials out of n number of random samples. How to use it in a question (Example): In a particular country, the probability of that it rains on any particular day of May is 0.35. Find the probability that it will rain exactly 10 days in May. Given that May has 31 days in total, we already identified the value for n which is 31, the value for x is 10, we also identified the value of probability which is $p=0.35$.
"binomcdf"	Use Case: Summation of probability of Binomial Distribution from 0 up to a specific number of trials out of n number of random samples How to use it in a question (Example): In XYZ Junior College, 65% of the student population are male. 12 students are randomly selected from the population. Find the probability that at most 5 students are male.

<table>
<tr>
<td> 
</td>
<td>Given that the number of students selected is 12, and we need to find the probability that <u>at most</u> 5 students are male.

In this case, we identified the value of n which is 12, the value of x which is 5 and we also identified the value of p which is 0.65.</td>
</tr>
<tr>
<td>“normalcdf”
[a]
 

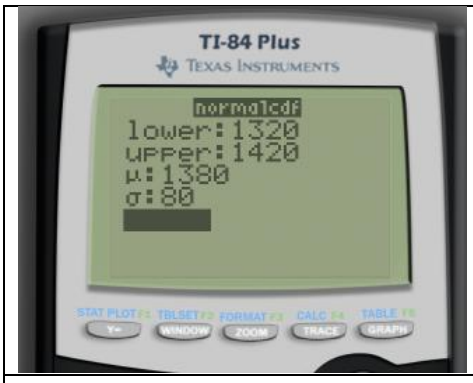
[b]
 

[c]</td>
<td>Use Case: Find the probability value of Normal Distribution (Area under curve of as with a Standard Normal Distribution), given the lower bound value, upper bound value, mean μ and standard deviation σ. [Please be extremely careful as the typical notation of normal distribution uses variance (σ^2) rather than standard deviation (σ). Read the question carefully before keying in.]

If you want your upper bound value to be infinity, just key in E99 or 1E99 into the upper bound.

If you want your lower bound value to be negative infinity, just key in -E99 or -1E99 into the lower bound.

How to use it in a question.
Given the normally distributed variable X with a mean 1380 and standard deviation of 80, find
(a) $P(X < 1300)$
(b) $P(X > 1400)$
(c) $P(1320 < X < 1420)$</td>
</tr>
</table>

	
invNorm 	Use Case: Given the probability (which is the area under curve where $P(X < k)$), this functionality enables students to find the value of X Given a normally distributed variable $X \sim N(3,4)$, find the value of m such that, $P(X \leq m) = 0.6217$ Note: If you want to find the value of which probability is $P(X \geq k)$, subtract the probability from 1 and key into the area. Given a normally distributed variable $X \sim N(3,4)$, find the value of m such that $P(X \geq m) = 0.7734$ In this case, simply subtract 0.7734 from 1 and key in the value which is 0.2266 into the area field.